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ABSTRACT

The document contains eight papers on research in career development of the handicapped, and is one of three volumes of selected papers presented at a November, 1981, international conference on the career development of handicapped individuals. Papers have the following titles and authors: "Research in the Area of Career Development for the Physically Handicapped" (E. Gobbel); "Rethinking Work and its Relationship to Adjustment and Self-Concept Among Retarded Males" (J. Heaney); "The Meaning and Value of Work: A Comparison of Handicapped and Non-Handicapped Adolescents" (S. Holub and R. Sherbenou); "Career Attitudes of the Learning Disabled Adolescent: Research Implicatons of Issues and Practices" (W. Kendall); "The Social and Vocational Adjustment of Learning Disabled/Behavior Disordered Adolescents After High School: A Pilot Study" (G. Meyers and J. Messerer); "Research Related to Vocational Teacher Attitudes Toward the Integration of Handicapped Students" (S. Minner); "Using the Life Centered Career Education Competencies for Institutionalized Adult Mentally Retarded Persons" (A. Mori); "Five Hypotheses About Career Development Initiatives and the Physically Disabled" (J. Palmer). (DB)

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SELECTED PROCEEDINGS FROM THE INTERNATIONAL CONFERENCE ON THE CAREER DEVELOPMENT OF HANDICAPPED INDIVIDUALS: RESEARCH

VOLUME 3

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Presented by The Division on Career Development
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Dallas, Texas

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CONTENTS

Preface

Selected Papers

Research in the Area of Career Development for the Physically Handicapped

Eva Marie Robinson Gobble

Rethinking Work and its Relationship to Adjustment and Self-Concept Among Retarded Males

James B. Heaney

The Meaning and Value of Work: A Comparison of Handicapped and Non-Handicapped Adolescents

Sharon Holub and Rita J. Sherbenou

Career Attitudes of the Learning Disabled Adolescent: Research Implications of Issues and Practices

William S. Kendall

The Social and Vocational Adjustment of Learning Disabled/Behavior Disordered Adolescents After High School: A Pilot Study

Gertrude S. Meyers and Jeffrey Messerer

Research Related to Vocational Teacher Attitudes Toward the Integration of Handicapped Students

Sam Minner

Using the Life Centered Career Education Competencies for Institutionalized Adult Mentally Retarded Persons

Allen A. Mori

Five Hypotheses About Career Development Initiatives and the Physically Disabled

John T. Palmer

PREFACE

Career education was first proclaimed as a major educational reform in 1971 when the then U.S. Commissioner of Education, Sidney P. Marland, Jr., introduced the concept to a group of secondary school principals at a national education convention in Houston, Texas. It wasn't long before special educators who were interested in coordinated efforts for exceptional individuals began to apply the concepts of career education to the teaching and training process.

In 1973 The Council for Exceptional Children jointly sponsored with the American Vocational Association a National Topical Conference on Career Education for Exceptional Children and Youth in New Orleans. The conference attracted over a thousand participants several of whom began to plan for the development of a formal organization that would promote career efforts across the country. This organization, The Division on Career Development, The Council for Exceptional Children, became a reality in 1976.

The career movement received another boost when The Council for Exceptional Children sponsored a second National Conference on Career Education for Exceptional Individuals in St. Louis, Missouri, February, 1979. The conference included two days of Training Institutes in addition to three days of presentations, workshops, and keynote speakers. The selected proceedings from the conference are available in: Career Futures for Exceptional Individuals, Charles J. Kokaska, Editor. Reston, Virginia: The Council for Exceptional Children, 1979.

This second national conference provided Division members with the opportunity to increase membership in the organization and expand their efforts toward providing career/vocational programs from the elementary school years to adult independent living situations. By this time, the Division had achieved

an adequate financial base and long term planning to publish a newsletter and journal, Career Development for Exceptional Individuals, which would further explore career concepts, research, and programs.

The papers in these three volumes are drawn from the proceedings of the third conference in less than ten years, The International Conference on the Career Development of Handicapped Individuals, Dallas, Texas, November 19-21, 1981. The conference was planned and sponsored by the Division on Career Development, the fledgling group of concerned professionals that began to talk about an organization less than eight years ago. The intent of this third conference was to highlight efforts that were in operation rather than "on the drawing board." This goal was achieved.

The conference plan included 82 sessions which were grouped under the following themes: adult career education, career and vocational assessment, comprehensive career education programming, consumer group involvement, daily living and personal social skills, research, and vocational preparation for gainful employment. Papers which were submitted by the participants were divided for the purpose of publication into three dominant topics: assessment (Volume 1), program implementation (Volume 2), and research (Volume 3).

The Executive Committee of the Division on Career Development, 1981-82, wishes to thank all of the professionals for their work in making the International Conference another successful endeavor. The Division has grown over the past few years because these professionals have seen the need for a career focus to the total life of exceptional individuals and developed the means to facilitate changes in our ideas and programs. We hope that these three volumes of Selected Proceedings will contribute further to efforts on behalf of the career futures of handicapped individuals.

C. J. K.

Long Beach, California

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Research in the Area of Career Development for the Physically Handicapped

Much information has been accumulated regarding the career behavior, knowledge, and development of non-disabled individuals (Crites, 1969; Pietrofesa & Splete, 1975). Some career development investigation has been conducted among groups of exceptional children (Lerman & Guilfoyle, 1970; Davidson, 1974); however it appears that there have been few studies which have examined the career behavior of spina bifida individuals (Overs, 1975; Brolin & Kolstoe, 1978). Anderson & Spain (1977) have suggested that more knowledge is needed concerning the career behaviors of young people with spina bifida myelomeningocele.

Spina bifida myelomeningocele is a birth defect which affects approximately 1 - 4 of 1000 children, making it the second largest birth defect (Woodburn, 1973). This defect is a result of the protrusion of the spinal cord through the back of the bony vertebral column that has failed to form properly in utero (Bleck, 1975). A myelomeningocele often results in severe disabilities such as: flaccid paralysis, muscular weakness, body deformities, loss of sensation, bladder and bowel paralysis, hydrocephalus, cognitive disorders, seizure disorders, visual difficulties and impotence among males (Bleck, 1975, Anderson & Spain, 1977; Mullins, 1979).

Studies of adolescents with spina bifida myelomeningocele have indicated that there is considerable worry concerning vocational futures among this population (Woodburn, 1973; Anderson & Spain, 1977, Gobble, 1980). While it is recognized that competitive employment is not a goal for all physically handicapped individuals due to medical problems and the severity of the disability, investigation is still needed in this area to determine some adult vocational role options for these individuals (Bigge, 1976; Anderson & Spain, 1977).

The major intention of this investigation was to provide descriptive information regarding the attitudes and knowledge about careers and selected personality characteristics (self concept and locus of control) among adolescents with spina bifida myelomeningocele. This knowledge is essential in providing relevant career information, support, and experiences for this group, as many more individuals with spina bifida myelomeningocele are surviving to adulthood.

Research Questions

In order to provide descriptive information concerning attitudes, interests and knowledge about careers and selected personality characteristics the following research questions were formulated:

1. What are the attitudes, interests, and knowledge about careers and the world of work among adolescents with spina bifida myelomeningocele?
2. What is the relationship between personality characteristics (self concept and locus of control) and aspects of career development among adolescents with spina bifida?

Subjects

The investigation was conducted at the Rehabilitation Institute of Pittsburgh in Pittsburgh, Pennsylvania. The sample included a total of twenty-one adolescents enrolled in a summer program for adolescents with spina bifida myelomeningocele.

Students ranged in age from 11 to 21 years, the average age was 14.6 years. There were 11 females and ten males. The students' I.Q. scores ranged from 53 to 120; seven of the students were in the mildly retarded range; five were in the borderline range; and nine were in the low average to normal range. Six of the students had been enrolled in regular education for the majority of their school history; three had been enrolled in regular classes within the last two years; and 12 had been enrolled primarily in special education classes during their schooling.

The number of times the students had been hospitalized ranged from 6 to 21 admissions for a variety of medical procedures. The average number of hospitalizations was 12.4 admissions for the total group. Thirteen of the students were incontinent, six were partially continent, and two were completely continent. Seventeen of the students utilized wheelchairs for their primary means of mobility; thirteen were independent in the use of their chairs. Four of the students ambulated independently; only one student ambulated without the aid of crutches. Many of the students had numerous secondary disabilities. Paraplegia, neurogenic bowel and bladder disorders, hydrocephalus, scoliosis, and seizure disorders were the secondary disabilities most frequently reported.

Method

The Career Maturity Inventory Attitude Scale and Competence Test - Knowing About Jobs, The Job Related Behavior subtest of the Social and Prevocational Information Battery, the Piers-Harris Children's Self Concept

Scale, and the Nowicki-Strickland Locus of Control Scale were administered to all students. Data were analyzed by *t* - tests, Fisher's exact tests and correlations.

Results and Discussion

Statistical analysis revealed that while spina bifida myelomeningocele adolescents were found to be less mature than a normative sample in career decisions making attitudes, no significant differences were found in the areas of career knowledge, self concept, and perception of control (Tables 1 and 2). It was also found that the severity of disability did not have an influential effect on aspects of career maturity and feelings of control in the environment. However, severity of disability (as measured by school placement, number of hospitalizations, mobility functioning, and degree of continence) did have an effect upon aspects of self concept. Students who were more severely involved tended to express more negative aspects of self, than those who were less involved. Overall, it was found that students had varied occupational interests and expressed a desire to participate in occupations which would allow them flexibility in the environment.

Despite numerous medical problems, adolescents with spina bifida felt that they would be able to work in the future (Table 3). It was found, however, that more than half of the students felt that their disability would have an effect upon job availability and modifications needed in the occupational areas in which they were interested. Perception of self was

found to be a significant factor in considering perception of ability to work and career knowledge (Table 1). Perception of control was found to be a significant factor when considering aspects of career decision making attitudes and career knowledge (Table 1).

Table 1

Significant Variables Associated with Aspects of Career Development

Norming Group	Career Attitudes	Perception of Ability to Work	Perception of the Effects of Disability	Career Knowledge
Demographic Factors				
Sex				*a
Age				*a
I Q				*a
School Placement				
# of Hospitalizations				
Mobility Functioning				
Degree of Continence				
Personality Characteristics		*b		*a
Self Concept	*b			*a
Locus of Control				

a - significant at $p<.05$ level
b - significant at $p<.01$ level

Table 2

Significant Variables Associated with Aspects of Personality Characteristics

	Total Self Concept	Factors 1	2	3	4	5	6	Locus of Control
Norming Group								
Demographic Factors								
Sex	*b		*a		*b	*b	*b	
Age								*a
I Q		*a			*a	*a		
School Placement	*a				*b	*b	*b	*a
# of Hospitalizations	*a						*b	
Mobility Functioning								
Degree of Continence								

Factor
1. Behavior
2. Intellectual & School Status
3. Physical Appearance
4. Anxiety
5. Popularity
6. Happiness & Satisfaction

a - significant at $p<.05$ level
b - significant at $p<.01$ level

Table 3

Responses of Spina Bifida Myelomeningocele Adolescents on the Career Interests Interview

Student	Will you be able to work?	Most Important to you on the job*	Second most important to you on the job*	Least Important to you on the job*	Preferred working conditions**	Occupational Interest	Will your disability make it difficult for you to work?
1	yes	3	1	6	1, 3, 5, 8, 9	Growing & caring for plants & animals	yes
2	yes	2	3	6	1, 4, 5, 7, 10	Nursing and human care	no
3	yes	3	1	5	1, 3, 5, 7, 10	Engineering	no
4	yes	6	1	4	2, 3, 5, 8, 10	Clerical & secretarial work	no
5	yes	3	1	5	1, 3, 5, 8, 10	Engineering	yes
6	yes	2	1	5	1, 3, 6, 8, 10	Nursing and human care	yes
7	yes	3	6	5	1, 3, 5, 8, 10	Growing & caring for plants & animals	yes
8	yes	3	6	4	1, 3, 5, 8, 10	Undecided	yes
9	yes	3	6	1	1, 4, 6, 8, 10	Law enforcement	yes
10	no	4	2	5	1, 3, 6, 8, 9	Nursing and human care	yes
11	yes	3	1	6	2, 3, 5, 7, 10	Paying, receiving & bookkeeping	yes
12	yes	3	1	5	1, 3, 6, 8, 10	Paying, receiving and bookkeeping	yes
13	yes	6	1	4	1, 3, 6, 8, 10	Clerical and secretarial work	no
14	yes	3	1	2	1, 3, 5, 8, 10	Education and social services	no
15	no	1	6	3	1, 3, 5, 8, 10	Medicine and medical technology	no
16	yes	1	3	2	1, 3, 6, 7, 10	Creative arts-musician	no
17	yes	6	3	2	2, 3, 5, 7, 10	Creative arts-pottery	yes
18	yes	1	4	6	1, 3, 6, 7, 10	Construction & maintenance	no
19	yes	1	3	5	2, 3, 5, 7, 10	Machine operating servicing & repairing	yes
20	yes	3	6	1	1, 3, 6, 8, 10	Retail sales and services	yes
21	yes	3	4	5	1, 3, 5, 7, 9	Natural sciences and mathematics	no

* Preferred Job Characteristics

1. Co-workers
2. Independence on the job
3. Interest in the job
4. Job security
5. Responsibility
6. Pay

** Preferred Working Conditions

1. Indoor work vs. 2. Outdoor work
3. Working with people vs. 4. Working alone
5. Working at many tasks vs. 6. Working at the same task
7. Working with tools (physical labor) vs. 8. Working at a desk (little physical labor)
9. Homemaking vs. 10. Employment in the home

Recommendations

It is recommended that further study is needed to assess areas relating to career maturity and personality factors among adolescents and adults with severe physical handicaps. Investigation concerning the factors influencing the development of positive career attitudes, perception of self, and feelings of control in the environment is also suggested.

The following overall recommendations are suggested for an adolescent population with significant physical problems, such as spina bifida myelomeningocele:

1. Provide students with career exposure in a wide number of occupational areas.
2. Provide simulation (hand-on) experiences concerning various occupational areas.

It has been found through data analysis and information gathered through interviews that students were familiar and had interests in various occupational areas. However, the investigator noted that many students were unfamiliar with the working conditions and skills needed in the various occupations. This lack of career awareness and orientation could effect the quality of career decisions and choices the individual may make in the future.

3. Relate basic academic and living skills competencies to the skills which will be needed in various occupational areas.

In order for students to gain maturity in making a career choice, they must be aware of the skills which they will need to accomplish in order to successfully enter an occupational area. Information gathered by the investigator in the career interviews revealed that many of the students had little knowledge concerning the skills which would be needed in areas of their career knowledge.

4. Provide opportunities for students to discuss potential employment problems with employed individuals who have similar disabilities.
5. Provide students with counselling services which will assist the student in determining realistic occupational choices.
6. Develop the concepts of the interdependency of workers, and the value and respect for the work of others through various job site visits, job analyses, and class projects.
7. Expose students to the various alternatives relating to skill training in entry level occupations in a variety of career areas.
8. Provide students with information regarding ways to implement career interests in a wide variety of occupational (paid/unpaid) and avocational settings.
9. Develop the concept of the interrelationship between different occupational areas and personal needs and interests which are important to the individual's career satisfaction.

Information gathered through the career interview revealed that students could benefit from discussing the modifications and compromises needed in various occupational areas. Many of the students expressed a need to discuss the problems relating to the impact of their disability in

a work setting with individuals with similar physical problems. It is felt if students are given various options that they can make more satisfied career choices in the future.

10. Provide decision making opportunities in simulated work environments and classroom settings to facilitate independence among students.

Analysis of the data has revealed that individuals who felt that they were in control of environmental events were more mature in career attitudes and career knowledge. It is important that physically disabled individuals accept responsibility for their own actions. It has been found through previous research that non-disabled individuals who feel that they are responsible for events in their environment achieved more (Lefcourt, 1976).

Conclusion

The findings from this study demonstrate, with the exception of career decision making attitudes, spina bifida adolescents did not demonstrate career immaturity or problems in selected personality characteristics. However, data analysis did indicate that the spina bifida adolescents were less mature in career decision making attitudes than a normative sample. It is recommended that future research would focus on the modifications needed in employment settings for severely disabled adults and compare them with the perceptions of the effect of disability upon employment among adolescents with severe physical handicaps.

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TITLE: Rethinking Work and Its Relationship to Adjustment and Self-Concept among Retarded Males

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ABSTRACT

Forty mentally retarded men from throughout the State of Kansas were divided into two groups of twenty based on employment status. Each was administered two instruments, the Social and Prevocational Information Battery and the Self-Perception Inventory. The former's purpose was to assess adult adjustment skills while the latter reflected one's self-concept. No significant differences on either instrument were determined between the mean scores of employed and unemployed groups. Using the Brolin and Kokaska model (1979), suggestions were made for improving both adult adjustment skills and self-perception through the work concept.

Much discussion in recent years has focused on the allegation from various quarters that the work ethic is no longer a viable force in our society (Rodgers, 1978). Wounded by the emergence of industrialization in the late nineteenth century and further decimated by post World War II automation, the work ethic was reported to be in the last stages of its death throes by the 1960s (O'Toole, 1974). Despite these negative assertions, the assumption is generally made that one who is employed adapts better to society and feels better about oneself than one who is not. Brown, in his study of the psychology of industry, states: "Work is an essential part of man's life since it. . . gives him status and binds him to society" (1958, 187). While identifying the functions of work, Friedmann and Havighurst (1954) refer to it as a source of meaningful life experiences and a means of identification and status.

Regarding retarded adults, Edgerton (1967) described work as having a significantly beneficial effect on lessening their feelings of inferiority. Vocational education classroom experiences of the author leave the impression that vocational educators of exceptional students uniformly assume that a steady job is a sine qua non for all of their graduates. Yet how do the graduates presently feel about the relationship between themselves and the work world? In a follow-up of his original study with Bercovici, Edgerton (1976) found that the earlier stigmatization of joblessness had disappeared. Terkel, in his best seller on the American laborer (1972), spoke of the daily humiliations of work, of workers who compared themselves to robots, whose only human actions were at the beginning and end of the day.

In order to investigate the work ethic as it affects retarded men at the beginning of the present decade, an adult adjustment inventory and a self-concept scale were administered to forty mentally retarded adult males residing

in the State of Kansas. A representative sampling from both rural and urban areas in the state was used.

SUBJECTS

Forty retarded male subjects between the ages of 18 and 54 were chosen from populations from rural and urban Kansas. They were not presently institutionalized. Their habitations included private residences, group living homes and parents' homes. Subjects were considered by qualified professionals to be capable of competitive employment at the time of the study. Areas through which retarded men could be located included sheltered workshops, the Kansas Association for Retarded Citizens, local public school systems and group living homes. Twenty of the subjects were currently employed. They worked as factory laborers, hospital aides, laundry aides and food service personnel, as well as farm laborers. The other twenty subjects were unemployed. They depended upon their parents, the government, or a combination of the two for their subsistence.

INSTRUMENTS

To assess adult adjustment skills, the Social and Prevocational Information Battery (Halpern, Raffeld, Irvin & Link, 1975) was used. This is a series of nine tests designed to gauge knowledge of skills and competencies considered critical for the ultimate community adjustment of mentally retarded adults. The tests measure purchasing habits, budgeting, banking, job-related behavior, job search skills, home management, health care, hygiene and grooming and functional signs. Although admittedly a knowledge-based instrument, the SPIB has shown a moderate relationship to an adjustment rating scale administered to vocational rehabilitation counselors.

For the measurement of self-concept, the Self-Perception Inventory (Soares & Soares, 1975) was administered. As used in this research, it measures solely the subject's perception of himself as a person. Twenty sets of statements were made. To each set the subject was required to respond in one of four ways: very strong, more strong than weak, more weak than strong, very weak. For example, one statement at the reader's left said "I think of others". Opposite the first, on the reader's right, a statement appeared saying "I think only of myself". One of the four above choices was checked in response to the dichotomous statements.

PROCEDURES

The data were collected by the author during the spring and summer of 1980. The Self-Perception Inventory was administered first, then a break was taken. After the break, the Social and Prevocational Information Battery was given in three sessions divided by a general break and lunch or dinner. Sites in which the subjects were tested included Association for Retarded Citizens offices, public school buildings, sheltered workshops and group living homes. Test materials, including pencils and erasers, were supplied for the subjects.

Mean scores for employed individuals were compared to mean scores for those unemployed on both the Social and Prevocational Information Battery and the Self-Perception Inventory. In order to determine whether the discrepancies in scores for either of the instruments administered were greater than could be attributed to chance, an analysis of variance (ANOVA) statistical design was employed.

RESULTS

The mean SPIB score for the employed group (180.35) and the mean SPIB score for the unemployed group (169.55) did not differ past the degree to which the difference could be attributed to chance. F was determined at .86 while the critical F was 4.098. Likewise, the mean SPI score for the employed group (17.45) did not significantly differ from the mean SPI score of the unemployed group (21.85). F was determined at .63 while the critical F was 4.098. As neither F was in the critical region at the .05 level of confidence, no significant differences in adult adjustment or self-concept were found based on the respective instruments administered. Results are shown in Tables 1 and 2.

DISCUSSION

The implications of this study are that retarded men who are employed have little or no advantage over those who are unemployed in adjusting to society or in their feelings toward themselves. As far as adjustment is concerned a second conclusion may be reached. Possibly retarded men with relatively adequate adjustment skills, opt for unemployment status. Regarding self-concept, competitive employment may no longer be considered a necessary component of a male individual's repertoire. A point may be made that previous to the past decade the fact of unemployment made a difference at least in self-perception. Edgerton (1967), in an anecdotal study, found that certain deinstitutionalized retarded adults felt a strongly negative stigma attached to unemployment. Yet in his follow-up with Bercovici (1976), unemployment no longer seemed a cause for dismay. In fact, not withstanding a lack of vocational success among a significant proportion of the group, "many of these people appear to define themselves as normal" (p. 493).

TABLE 1

AVOVA for SPIB Score Comparisons

Source	Degrees of Freedom	Sum of Squares	Mean Square	F
Between Group	1	1276.900	1276.900	0.86
Within Group	38	56287.430	1486.248	
Total	39	57564.332	1476.008	

TABLE 2

ANOVA for SPI Score Comparisons

Source	Degrees of Freedom	Sum of Squares	Mean Square	F
Between Group	1	193.600	193.600	0.63
Within Group	38	11587.449	304.933	
Total	39	11781.051	302.078	

Significant at .05 level of confidence with 1.38 df. critical region is F - 4.098.

Perhaps even less expected than the similarity in self-concept was the closeness in adult adjustment scores. Subtests, such as budgeting, job-related behavior, and functional signs would seem directly related to a person's employment status. However, no significant differences were found there. See Table 3. Pending further research, it would appear that evidence is being accumulated to dispute the assumption held by many educators that the work ethic is still a formidable force in our society. At any rate that assertion is the subject of some doubt in the case of mentally retarded men.

TABLE 3

Mean Scores on SPIB	Purchasing	Budgeting	Banking	Job Ref. Beh.	Search Skills	Household Mgmt.	Health Care	Hygiene & Grooming	Functional Signs
Employed	22.15	20.35	19.85	19.10	20.85	21.90	20.20	17.85	18.10
Unemployed	22.85	19.25	18.30	18.30	19.75	19.05	19.00	15.50	17.15

If that assertion is true, what is the recourse left to those who hope to train handicapped individuals to become independent citizens in the occupational as well as the personal/social and daily living domains? Obviously, the world of work must be made to forge a greater imprint on the individual's self-concept than it has in the recent past. In addition, the fact of employment should be put to greater use as a means of linking the handicapped person to the rest of the working population who balance checkbooks, bowl on Saturday night, and fix their own sink when the faucet's leaking.

Although not specifically addressing the problem of self-concept, certain subcompetencies found in Brolin and Kokaska's Career Education Curriculum Competencies (1979, p. 108-9) appear to be a step in the right direction. The relevant subcompetencies are:

1. Being able to express feelings of worth
2. Being able to discern how one is viewed by others
3. Being able to develop confidence in oneself
4. Being able to identify the personal values met through work
5. Being able to identify the societal values met through work
6. Being able to identify the renumerative aspects of work
7. Being able to identify major occupational interests
8. Being able to identify major occupational needs
9. Being able to make realistic occupational choices

While contributions toward a positive work attitude are self-explanatory in the latter six subcompetencies, the idea of work as an enabler of fulfillment could be incorporated by the teacher for the initial three subcompetencies.

Regarding adult adjustment skills, the remaining competencies listed by Brolin and Kokaska (1979) which cover daily living skills and occupational guidance and preparation, as well as personal/social skills, provide a solid superstructure for a program geared toward this end. The competencies are

broken down into subcompetencies which may be remediated through individualized educational plans (IEPs) for public school children and adolescents and individualized program plans (IPPs) for adults receiving educational benefits.

To assume that attitudes and adult adjustment skills need not be addressed until the high school years, is to gravely miscalculate the importance of both in forming the independent handicapped adult. Prekindergarten is not too early to begin assigning chores, explain what "Daddy" does for a living, and to pointedly model proper hygiene habits. The more independent living and work adjustment skills mastered before high school, the more time is made available to learn a specific trade during high school.

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The Meaning and Value of Work:

A Comparison of Handicapped and

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The Meaning and Value of Work:
A Comparison of Handicapped and
Nonhandicapped Adolsecents

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Many teachers wonder why some students spend so much extra time at their class project or term paper. Why some spend 20 extra minutes when everyone else stops when the bell rings. A commonly identified reason is that of motivation. Motivation has been studied extensively. While there are many approaches to motivation theory, there are two which appear to be the most dominant.

These two dominant approaches to the study of motivation can be defined as expectancy theory and drive theory. Each approach includes as a primary notion that a reward or some other desired or valued outcome will be associated with an appropriate stimulus. In other words, a connection that triggers a learned response within an individual will be made when new stimuli are introduced, i.e. a carry-over effect exits. Drive theory relates this learned connection to the strength of the stimulus being introduced. Expectancy theory, however, relates the behavior outcomes as perceived or "expected" because of the actions taken by individuals.

Each theory assumes that individuals will take the shortest or most direct path toward a valued goal or reward (Vroom, 1964). Each approach is based on the expectation that extrinsic motivation underlies the actions taken. Each also assumes that the expected goals provide a satisfaction independent of the activity itself. However, actions are not always valued in conjunction with a reward but instead may be valued for their own sake and may be self-sustained without external inducements. In situations such as these, behavior is more likely to be intrinsically induced. Therefore

extrinsic motivation emphasizes the value individuals place on outcome and expectation of outcome to exist while intrinsic motivation refers to the pleasure associated with doing the activity of and for itself. In view of these two categories of motivation, task performance in a vocational or career setting may then be seen as having 1) a value associated with the behavior, 2) the value associated with the achievement, 3) the value associated with the rewards given by others. The first two sources being mediated by the individual and therefore, considered intrinsic. The third source determined by the strength of the reward associated with the behavior, thereby comprising an extrinsic means of satisfaction for the individual. Several researchers have examined motivations behind career choices and the values which individuals hold regarding work.

Literature Review

Kazanas, Baker, Miller and Hanniah (1971) observed that the perception of the meaning of work may vary a great deal. That is, the reason a person works at a particular job may be for a variety of reasons. Values associated with remuneration, status, opportunity for advancement, self-direction or personal satisfaction may direct individuals toward seeking a specific type of job.

Researchers have long been interested in the reasons for these career choices. In a study completed by Paine, Deutsch and Smith (1967) it was found that work values and family background are closely related. The type of work in which the older generation engaged had a significant effect on the choices made by the younger generation (Hollingshead, 1949). Porter's study (1954) of senior boys still in high school discovered that career selection was related both to mental ability and their father's occupation.

Interestingly, the father's occupation appeared to have the greatest effect on their choices. Kinnan and Pable (1962) report similar relationships between work values and family background.

Super (1962), Fryer (1931), Darley, Hagenah (1955) and Ginzbery (1954) made distinctions between work which is valued for its own sake and work which is interesting largely because of external factors such as material support or association with people. Those individuals who were more "self-actualized" or internally motivated differed in their job selections from those who were motivated by external factors. Centers and Burgental (1966), after extensive study, found a significant difference in work values or motivations between white collar and blue collar workers. White collar workers emphasized intrinsic values and blue collar workers emphasized extrinsic values. Blood (1969) concluded, from his research with military men, that the job satisfaction is preceded by and influenced by the development of work values.

Several researchers have been interested by the process in which work values develop. Thompson (1966) surveyed students during their freshman year and again during their sophomore year in high school. He foudn no significant differences in the values expressed by these students across that span of time and concluded that values as well as being basic to the individual are slow to change. Yoganarasimhial (1957) suggested that work values crystalize during adolescence and that intrinsic rewards and vocational preference appear to be correlated. He, too, suggested that the socioeconomic status of the family plays an important role in job choices.

The role of work values and socio-economic status has been fairly well researched. Work values are significantly influenced by parent's occupation and educational level, social class and other demographic variables (McGough

1977). However, there is a scarcity of information regarding the meaning and value of work to those individuals identified handicapped.

Why look at such sources of value related to the vocational or career behaviors of special populations? One reason which surfaces immediately is that awareness of the degree to which a person is intrinsically or extrinsically motivated can allow a better match between student and career choice or career placement thus allowing for a higher percentage of satisfaction to be associated with accomplishing the task, i.e. the job activities. In the economy of today this may be a focal point in which to concentrate efforts. Special needs educators will need to maximize efforts to match the job to individual. This will need to be done as expediently, cost effectively, and accurately as possible. For special education and vocational special needs personnel, increased awareness of appropriate strategies that increase a person's degree of intrinsic motivation toward accomplishing a task can have significant impact. Reduced need for extrinsic rewards is usually an outcome of increased intrinsic motivation. This is indeed important if coordinators or supervisors of handicapped and/or disadvantaged students have a limited supply of extrinsic rewards available to them. In a period of economic recession, such situations can be prevelant.

The focus of the present study is to examine whether handicapped youth hold different meanings and values of work as compared to their peer group.

Instrumentation

This research duplicated some of the earlier procedures carried out by McGough (1976). The meaning and value of work scale that was developed at the University of Missouri, Columbia by H. C. Kazanas (1974) was utilized to measure a population of senior high handicapped and nonhandicapped

vocational and prevocational students. The seven factors which comprise Part I of the scale are: 1) opportunity, 2) philosophical orientation, 3) social orientation, 4) experience, 5) satisfaction/status, 6) activity and 7) productivity. Part II consisted, as stated earlier, of seven intrinsic factors. These are 1) satisfaction, 2) independence, 3) self discipline, 4) altruism, 5) self-realization, 6) interest in work and 7) self actualization. The extrinsic factors of Part II consisted of: 1) economic, 2) working conditions, 3) prestige, 4) inter personal relations, 5) social status, 6) recognition and 7) security. Kazanas reports the Split-Half reliability coefficients for Part I as .91 and for Part II as .80.

Subjects

The subjects of this study were 85 students attending a high school in a rural midwestern area. These students, ages 14-19, were all involved in vocational or pre-vocational classes. The vocational areas included agriculture, business education, distributive education, home economics and work experience. The work experience group had been diagnosed and labeled as "handicapped" by the current standards and practices of that district. These students exhibited heterogenous, but significant, problems in learning. The students attending the other vocational classes were considered to be "nonhandicapped". The average age, sex and the number in each group are shown in Table 1.

Procedure

The vocational classes were taken intact, that is, each member in the entire class was administered the test in each of the occupational areas. The students were given the Meaning and Value of Work (Kazanas, 1374) both Part 1 and Part 2 during their vocational class period. The "regular" students

read and marked the test independently. Because we were informed that many of the work experience students had a reading level below that expected for the test, we read each item to the students as a group and each individual then marked his/her answers independently.

Data Analysis

A series of simple analysis of variance (ANOVAs) were performed to determine the relationships of each variable of the demographic data (age, sex, occupation, etc.) and the performance on Part 1 and Part 2 of the test. Where relationships were found a second statistical test, the Scheffé, was performed.

Results

Through the ANOVA, several variables were found to have significance. Sex and occupation were found to be significantly related. Further investigation indicated that our population of students had chosen very traditional roles; that is, the home economics class and the business education classes were heavily or exclusively populated with females. The agriculture classes contained mostly males. Distributive education and work experience classes were more evenly divided between males and females as might be predicted. Table 2 shows the relationships studied.

Age and Part 1 (meaning of work) were significantly related. The trend was that the older students interpreted the term "work" more broadly than did younger students.

Other significant variables were age and occupation group, sex, and Part 2 (the value of work), occupational group and Part 1 (meaning of work). That age and occupational group were significantly related was no surprise. Indeed, our sampling was biased. It was school policy that students could

not enroll in certain vocational classes, i.e. distributive education, until their junior year. Therefore, this finding is not meaningful.

It was found that males and females valued work differently. Males were more extrinsicly motivated than females. This corroborates the research of Grace and Lee (1974).

Further examination of the relationship between occupational group and Part 1 presents some interesting interpretation problems. Using a t-test the scores of the work experience group (the handicapped population) were compared to the nonhandicapped population. The difference was significant However, the age of the work experience group is approximately 1.9 years less than that of the combined mean age for the other occupational groups. As was discussed earlier, older students interpreted the term "work" more broadly than did younger students. These differences disappeared when the age factor was partialed out.

The Sheffé is a much more rigorous test of significance and all significant differences disappeared with the more demanding statistical examination. We can only intrepret that these relationships are some what loosely tied to one another and may not be interpreted as being causative in any way.

Strategies for Increasing Students Intrinsic Motivation

Changing of altering the job tasks that students are involved in as part of their daily classroom assignments or part-time employment is a first step in increasing intrinsic motivation associated with the test. Ways in which this can be accomplished are explained below.

(1) Increase in the variety of tasks for which each student is held responsible. A greater variety of items regarding job responsibilities

should be systematically introduced into the present work situation.

(2) Increase task uncertainty - increase the amount of information processing students become involved in during task completion. However, educators must look very closely at the student's personal tolerance for ambiguity; otherwise the level of frustration may be too high.

(3) Increase the social interactions involved in the work environment. For most students the intrinsic valence associated with the task will be greater when social interaction is an integral part of the activity. Formation of task groups or increasing contact with employees as co-workers will allow participation to increase.

(4) Increase the "wholeness" of the tasks. Students need to be given opportunities to complete entire processes.

(5) Increase the significance associated with the task. This may be done by upgrading the students present work "usefulness".

(6) Increase the responsibility for results. Allow students more space to decide upon activities and to be held accountable for their completion. Begin giving them opportunities to schedule activities, decide on work methods and check on the quality of their production.

(7) Decrease some of the barriers associated with task accomplishment. Restructure jobs or provide supervision needed to increase the ability to effectively complete a task. Make sure educational skill or social barriers are being addressed while work is being completed.

(8) Increase opportunities for the students to obtain the results from task completion. Increase feedback of performance.

These strategies need to be addressed or considered when educators are providing for both in class instruction and/or outside career development opportunity in the community. Intrinsic rewards can be coupled with

extrinsic rewards in order for students to achieve a balance of reward satisfaction. Identification of motivational strengths in individual students allows supervisors and educators to provide a more appropraite balance of motivators for optional sucess of individual student performance.

Implications for Special Needs Educators

Several theorists (Hersberg, Vroom, McGregor) have indicated that intrinsic motivation is long lasting thus providing for a more lasting effect on the individual. If educators can begin to develop within individuals some intrinsic values associated with work then perhaps long range job satisfaction will be sustained and dependence upon extrinsic motivation lessened.

The presence or absence of a handicapping condition does not appear to affect the values which individuals hold regarding work. Rather, we must assume from previous research that work values are based on cultural/familial values. Therefore, career developers need to obtain and analyze information on the cultural values of individual students before placing them in work situations. This may also lead to a better understanding of what individuals are looking for in jobs thus achieving a higher degree of matching jobs to individuals.

TABLE I

Occupational Group	*$\bar{x}$ Age*	*# Males*	*# Females*	*Part 1 $\bar{x}$*	*Part 2 $\bar{x}$*
Agriculture	*17.67*	*11*	*1*	*153.8*	*22.75*
Business Education	*17.40*	*0*	*10*	*153.2*	*15.80*
Distributive Education	*17.08*	*23*	*16*	*156.1*	*22.92*
Home Economics	*17.89*	*2*	*7*	*155.9*	*26.44*
Work Experience	*15.67*	*9*	*6*	*142.9*	*20.73*

Total number of subjects = 85
Age range: 14 to 19

Part 1 Total possible points = 200
Part 2 Total possible points = 42

Table II

INTERACTIONS MEASURED	*ANOVA*	*SCHEFFÉ*
Age/Occupation	*	*NS*
Age/Part 1	*	*NS*
Age/Part 2	*NS*	--
Sex/Part 1	*NS*	--
Sex/Part 2	*	*NS*
Occupation/Part 1	*	*NS*
Occupation/Part 2	*NS*	--
Occupation/Sex	*	*NS*

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Career Attitudes of the Learning Disabled Adolescent: Research Implications of Issues and Practices

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Abstract: The purpose of the present study was to investigate the extent to which four groups of learning disabled adolescents differed on career attitudes as related to making a sound career decision. The subjects included: (a) 50 LD students enrolled in secondary regular classes, (b) 50 LD students enrolled in secondary learning disability classes, (c) 50 LD students enrolled in secondary vocational training classes, and (d) 50 LD students integrated in secondary regular classes and receiving additional support beyond that ordinarily provided in regular classes through Learning Resource Centers. Results suggest that LD adolescents in regular classes were superior to the other groups studied in career attitudes. An additional finding was that significant differences in career attitudes exist in the four learning disabled groups.

Career Attitudes of the Learning Disabled Adolescent: Research Implications of Issues and Practices

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Efforts to provide comprehensive career education programs for the learning disabled adolescent is an issue of serious concern for professionals and parents (Goodman, 1978; Kendall, 1981a; Mann, Goodman, & Wiederholt, 1978; Wiig & Semel, 1976). Several facts help to explain this concern. First, it is becoming increasingly apparent that educational programs for the learning disabled adolescent fail if they do not provide comprehensive preparation for the world of work (Irvine; Goodman, & Mann, 1978). Second, Directions for good occupational and career education programs for learning disabled adolescents are not clearly defined (Mann, et. al., 1978). Third, recent Federal Legislation (Public Law 94-142, 1975) and State Due Process regulations mandate that services be provided for these students (Abeson & Zettel, 1977; Ballard & Zettel, 1977; Bryan & Bryan, 1978; Hayes & Higgins, 1978; Hubson & Graham, 1978).

It is important that career education programs for learning disabled adolescents emphasize career attitudes in regard to occupational choice, as well as preparation in specific job related skills (Bingham, 1978). Although several studies have focused on career education for exceptional children (Brolin, 1977; Brolin & D'Alonzo, 1979; Gysbers & Moore, 1975; Gysbers & West, 1975; Hansen, 1977; Hoyt, 1976; Miller, 1975; Phelps &

Lutz, 1977) few have questioned whether adolescents with learning disabilities have incorporated attitudes about themselves that are reflective of their eventual work behaviors. Of those that have been reported (D'Alonzo & Miller, 1977; Levy, 1973; Marland, Litchenwald, & Burke, 1975; Wallace & Larsen, 1978) conclude that instructional approaches to the learning disabled adolescent must emphasize relevancy of affective and career educational components.

Research Suggestions

The necessity to implement learning disability programs at the secondary level is so urgent that programs are rapidly emerging in secondary schools in spite of the lack of research, assessment instruments, appropriate materials, and teachers trained for work with learning disabled adolescents (Lerner, Evans, & Meyers, 1977). Research is needed in career education for learning disabled adolescents in order to appropriately facilitate educational programs that provide comprehensive preparation for the world of work (Izard, 1977; Meyen & Deshler, 1978; Porter, 1980; Saski & Wiederholt, 1978). As special educators immerse themselves in the design of research on learning disabled adolescents they often tend to ignore current trends and issues in secondary education as a whole (Deshler, 1978). Since learning disabilities are largely an educational phenomenon and problem (Larsen, 1978), special educators must become alert to events in secondary schools in general and make programming and research decisions within that context.

Learning Disabled Adolescents in Resource Centers

While the efficacy of programs offered through the resource model is equivocal, (Brandt, 1972; Brandt, 1975; Ito, 1980; Ito, 1981; Pepe, 1974; Sabatino, 1971; Semmel, 1975; Sindelar & Deno, 1978), a pattern of flaws

have been reported in the conceptualization of services offered to LD students through this design (Burgett & Dodge, 1976; Cruickshank, 1974, 1977; Gickling and Theobald, 1975; Harris & Mahar, 1975; Jenkins & Mayhall, 1976; Kendall, 1980; Payne & Murray, 1974; Shotel, Iano & McGettigan, 1972; Speece & Mandell, 1980). Furthermore, efforts to offer services to learning disabled students with other handicaps almost exclusively through the resource room model suggest a need for study (Cruickshank, 1977).

Social competence and Attitudinal Development

It is essential that social acceptance be promoted in learning disabled adolescents in the development of positive career attitudes (Kendall, 1981b). A number of studies i.e., (Bruininks, 1978; Bryan, 1974; Bryan & Bryan, 1977; Bryan & Wheeler, 1974) suggest that learning disabled students often initiate and are recipients of negative social behaviors from their school peers. With an increased effort to provide comprehensive programming for exceptional children, regular and special educators are being charged with the responsibility of meeting the instructional demands of children evidencing a variety of social difficulties (Strain, Gable, & Hendrickson, 1978).

The research reviewed suggests that professionals now have the benefit of critiques of secondary school programming and are alert to their misgivings (Cruickshank, 1977; Deshler, 1978; Goodman & Mann, 1975; Larsen, 1978; McNutt & Heller, 1978; Mercer, 1979), many of which must be avoided in structuring career education designs for learning disabled adolescents. As new programs are developed and before implementation becomes finalized, it is important that a variety of career education practices be examined. Specifically, this study investigated the extent to which four groups of

learning disabled adolescent differed on career attitudes as related to making a sound career decision. The null hypothesis of no difference was formulated.

Method

Subjects

Two hundred subjects were chosen from twelve high schools in the inner city of a large metropolitan area. The test subjects were randomly selected so that a cross section of male-female, and black-white were represented. The majority of the population is made up of members of lower socioeconomic backgrounds. The Wechsler Intelligence Scale for Children-Revised (WISC-R) was used to determine the intellectual classification range for participants in this sample.

The four groups included: (a) 50 LD students enrolled in secondary regular classes, (b) 50 LD students enrolled in secondary learning disability classes, (c) 50 LD students enrolled in secondary vocational training classes, and (d) 50 LD students integrated in secondary regular classes and receiving additional support beyond that ordinarily provided in regular classes through learning resource centers. Only subjects who had been assigned to the identified setting for a period of at least two years were included in the study. Additional subject characteristics are presented in Table 1.

Procedure

The attitude scale of the Career Maturity Inventory (Crites, 1978) was used to determine career attitudes. The inventory evaluates the maturity of attitudes that are critical in realistic career decision making. The attitude scale elicits the feelings, subjective reactions,

TABLE 1

Means and Standard Deviations (SD_s) for Chronological Age (CA)[a] Career Attitude[b] and IQ[c] for the Four Groups

Groups	CA[a]		Career Attitude[b]		IQ[c]	
	Mean	SD	Mean	SD	Mean	SD
Regular	171.06	12.88	44.19	4.86	84.54	7.64
Learning Disability	183.32	16.98	37.99	4.11	82.36	7.64
Vocational	188.98	17.38	42.31	4.31	83.90	7.16
Resource Center	177.68	11.60	43.18	6.23	83.18	9.01

Note. [a]In Months.

[b]Career Maturity Inventory.

[c]Wechsler Intelligence Scale for Children-Revised.

and dispositions that the individual has toward making a career choice and entering the world of work. Is work seen as a meaningful focus of life or is it viewed as drudgery? How involved and independent is the individual in the choice process? What considerations are made in selecting a career? These and other conative aspects of decision making are stated in the items of the Attitude Scale as they have actually been verbalized by young people. More specifically, five attitudinal variable are surveyed: decisiveness in career decision making; involvement in career decision making; independence in career decision making; orientation to career decision making; and compromise in career decision making.

Results

The data were analyzed using a one-way analysis of variance. Significant differences were found among the means of the career attitude scores of the four groups ($F=15.17$, 3/196 df, $p < .05$). Table 2 presents these results. Therefore, the hypothesis of no difference was rejected. Additional analyses of these findings were performed for all pairwise combinations of the means by usage of a critical t-Test. Means compared were: (a) regular LD group vs. learning resource group; (b) regular LD group vs. vocational training group; (c) regular LD group vs. learning disability group; (d) learning disability group vs. learning resource group; (e) learning disability group vs. vocational training group, and (f) vocational training group vs. learning resource group. Table 3 presents the results of differences between the various means.

Analyses of the career attitude scores for the four groups revealed significant critical differences between the regular vs. learning disability, learning disability vs. learning resource center, and learning

TABLE 2

Analysis of Variance of Career Attitude Variables for the Four Groups

Source	SS	df	MS	F
Total	5918.98	199		
Between	1115.68	3	371.89	15.17*
Within	4803.3	196	24.51	

* $< .05$

Table 3

Results of Critical Differences Between Groups

Group	df	Career Attitude Mean Diff.	C. diff.
Regular Resource Center	196	1.01	1.95
Regular Vocational	196	1.88	1.95
Regular Learning Disability	196	6.20	1.95*
Learning Disability Resource Center	196	5.19	1.95*
Learning Disability Vocational	196	4.32	1.95*
Vocational Resource Center	196	.87	1.95

Note. There were significant critical differences between three pairs of the means tested for the four groups.

*$p < .05$

disability vs. vocational training group means. No significant difference was revealed between the regular vs. learning resource center, regular vs. vocational training, and vocational training vs. learning resource group means. The means and standard deviations (SD_s) for each of the five attitude subscales of the Career Maturity Inventory for each group are illustrated in Table 4.

Discussion

Investigation has suggested that career attitude of learning disabled adolescents in learning disability classes were lower than that of learning disabled adolescents in regular, vocational training, and learning resource center groups. Since many of the learning disabled students presently being served in learning disability classes were formerly in classes for the educable mentally retarded, it seems appropriate that the nature of their attitudes be taken into account. Positive attitudes are directly related to academic excellence as well as to production in the employment arena.

The vacational training classes demonstrated lower career attitude scores that the regular and learning resource groups. This was so even with an emphasis on career preparation. This finding is supportive of reports of (Miller, Sabatino, & Larsen, 1980), that special education teachers have not been professionally prepared to develop or implement secondary level programs that address the issue of employment.

A significant career attitude difference was revealed between the regular and learning disability, learning disability and learning resource, and learning disability and vocational training group subjects. An additional finding in the present study was that career attitude scores for the regular and learning resource, regular and vocational training, and

TABLE 4

Means and Standard Deviations (SD_s) for Each of the Attitude Subscales of the Crites Maturity Inventory for Each of the Four Groups

Groups	Decisiveness in Career Decision Making		Involvement in Career Decision Making		Independence in Career Decision Making		Orientation to Career Decision Making		Compromise in Career Decision Making	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Regular	46.48	8.60	40.04	8.09	43.94	6.12	44.44	9.04	46.04	7.80
Learning Disability	44.72	6.19	32.02	5.90	36.78	7.70	39.44	7.20	36.94	5.57
Vocational	46.66	8.00	37.96	4.52	42.36	6.88	43.06	8.08	42.66	6.24
Resource Center	44.86	7.25	40.44	9.38	43.38	8.73	43.06	9.17	42.82	8.72

vocational training and learning resource groups did not differ significantly.

Career education for the learning disabled adolescent is an issue of serious concern in the field of learning disabilities. Therefore, it seems appropriate to review several of the issues of this movement. First, the movement toward career education will fail if professionals working at the secondary level do not facilitate pedagogical activities for adolescents that include skills for coping with daily living, occupational preparation, and psychosocial problems. Second, there must be cooperative career education planning between secondary learning disability and regular classroom teachers. Third, it is essential that the availability of specific secondary special education teacher preparation programs at colleges and universities in the United States be facilitated. Additional critical issues in career education for the learning disabled follows:

1. Career education is the responsibility of everyone, and therefore, should be infused throughout the school curriculum and in home and community settings.
2. Educators should put forth an effort to involve school and community resources to the maximum extent possible so that students are provided with the least restrictive career development experience available.
3. Because of the variety of learning styles, abilities, maturation, cognitive functions, and social-emotional development of learning disabled adolescents, career education experiences will need to

be tailored to meet their unique individual needs.

4. School districts should develop comprehensive career education programs to the extent that objectives are specified, the means to achieve those objectives outlined, and evaluation instruments identified.
5. Career education enables an individual to explore the occupational world, to make critical decisions concerning specific careers, and to enhance self accomplishment.
6. Career education should be an element of the total school curriculum, thereby promoting maturity in occupational selection, and complementing academic standards.

Career education involves a comprehensive educational program, focusing on careers, which begins in early childhood and continues throughout adulthood. The primary objective at the adolescent level is to shape the student's awareness of occupations into preparation for a career.

If career education is to be implemented for learning disabled adolescents, it will happen only through the cooperative efforts of personnel within local school districts. Research suggests that the majority of teachers, counselors and administrators are supportive of the career education movement, however their interest and support for the movement will collapse if they do not receive immediate assistance in planning career education programs.

In summary, it has been suggested that significant differences in career attitude of learning disabled adolescents exist in secondary regular, learning disability, vocational, and learning resource groups.

This finding would suggest that learning disabled adolescents exhibit immaturity in the important attitudes associated with career choice. If the education profession is to serve all children well, it will take courage, integrity, understanding, and ethics to state clearly what constitutes valid practice. Providing learning disabled adolescents with programs that develop appropriate career attitudes is not a benevolent act but a prerequisite for valid professional competence.

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THE SOCIAL AND VOCATIONAL ADJUSTMENT OF LEARNING DISABLED/BEHAVIOR DISORDERED ADOLESCENTS AFTER HIGH SCHOOL: A PILOT STUDY

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Abstract

A pilot version of a followup study designed to determine the adjustment concerns of LD and BD young adults after leaving high school was undertaken. The study attempted to test procedures considered less fallible then those reported in previous research. Results indicated that LD's, more so than BD's or a "regular class"control group experienced adjustment difficulties in many aspects of adult life. Results, however, await further verification in the full scale version of the study. Implications for the field of special education are discussed.

If in fact learning disabilities (LD) result from variations in the central nervous system and certain characteristics of the behavior disordered (BD) extend beyond the school years, it would therefore seem likely that these affected adolescents would experience particular difficulties upon leaving school. A close understanding of the adjustment process encountered by LD and BD youth in later life should be significant for the special educator in high school and university settings. For example, such studies might indicate training needs in specific life skills areas such as the constructive use of spare time. Despite the importance of such research, few studies concerning these issues have appeared. The few available studies suffer from various methodological flaws which render their results questionable. A key deficiency in these studies is the failure of most researchers to include a "normal" or "average" control group. Inclusion of such a group is required in order to establish a reference of typical experience for each school studied. That is to say, it is necessary to establish the "typical" post-graduate experience for "normal" graduates of a given program. It may be, for example, that none of the graduates find jobs, be they "normal", LD, or BD!

Other methodological concerns include experimenter bias (i.e., the educators of students also served as experimenters; see Rogan, 1976; Silver, 1969); the use of atypical population, such as those found

in remedial clinics(Falfard & Haubrich, 1980; Menker, 1967) and failure to control for socioeconomic status (SES), a critical factor with regard to economic opportunity (Silver, 1969). Additionally, in the LD area researchers have failed to identify the specific learning disabilities which are associated with particular adult adjustment difficulties (e.g., expressive language disorders, visual-perceptual disorders to name two).

There is clearly a need for carefully designed research which is able to highlight the adjustment difficulties of post-secondary LD and BD learners. A pilot version of such a study is reported in this paper.

The purpose of the pilot was to provide a prototype follow-up study of learning disabled and behavior disordered adolescents with respect to their adult adjustment concerns and difficulties. The project was designed to circumvent pitfalls encountered in earlier research (discussed above), to directly test the feasibility of the resulting design, and to determine the adequacy of the constructed questionnaire. The reader is cautioned that results obtained from this first phase must be considered preliminary, requiring further corroboration in later phases.

METHOD

Subjects

Twelve learning disabled (LD), nine behavior disordered (BD), and 23 "regular class" controls, all graduates of greater Chicago metropolitan area high schools, participated in the study. Subjects were identified from a list of special education and regular class graduates obtained from each of the four high schools. Research assistants attempted to contact these graduates and gain their participation in the study. Several difficulties were encountered: (1) many graduates had relocated and forwarding addresses were difficult to obtain and (2) many graduates of special education programs did not wish to participate. Cooperation was obtained from a fairly equal amount of graduates (i.e., LD, BD, and controls) from two suburban high schools. The decision was made to use this population for purposes of the pilot study (N's have been reported above).

Most of the graduates who participated in the study had been out of school between two and three years (the mean elapsed time for the controls was 2.3 years, 2.2 years for the LD's, and 2.6 years for the BD's). Few had married or were engaged (3 of 23 controls, 1 of 12 LD's, and 2 of 9 BD's).

Procedure

A 55 item questionnaire was developed to shed light on the adaptive adjustment of LD and BD graduates. The instrument's item content may be divided as follows: demographics (e.g., marital status, living arrangements, etc.), determination of SES and family background, adequacy of high school preparation, current job satisfaction, interpersonal relations at work, post-secondary training, use of leisure time, social adjustment (e.g., friendships, dating, etc.). The instrument was administered to participants either through an in-person interview or over the telephone.

RESULTS

Vocational Adjustment

A majority of the participants in this study have worked for their current employer for two or less years as was expected. (The reader will recall that the mean elapsed time since high school graduation was approximately 2.4 years across all groups). Specifically, 13 of the 22 controls, 8 of the 11 LD's, and 6 of 7 BD's were employed at their current position for 2 or fewer years. Of particular interest was the finding that 4 of 11 LD's and 2 of 5 BD's reported some difficulty "getting along" with their boss or fellow workers. None of the controls reported this difficulty. Further, the LD group appears to require more on the job supervision than either of the other two groups. Six of 10 LD's reported that they sometimes or

always are "told what to do" on the job, whereas only 7 of 22 controls, and 1 of 7 BD's reported this experience.

Liking one's job is certainly an important aspect of one's work. However, it is also true that two people performing the same job may like their work for somewhat different reasons. Accordingly one result of this pilot study was the finding that what LD's liked most about their work was very much different than what the remaining groups claimed to favor; that is, 6 of 11 LD's stated that earning money was the best part of their job. None of the BD's and only 2 of 21 controls stated that earning money was what they enjoyed most. Ten controls and 4 BD's stated that "being with people" was important to them. Remaining responses mentioned included: "helping people," feeling independent, and being active.

Every good job has at least one aspect related to it worth complaining about. The most frequent job related complaint of the control and LD populations concerned "negative working conditions" (e.g., tiring physical labor, dirty working conditions, etc.). Four of 19 controls and 3 of 11 LD's were unhappy about their working conditions. Three controls and 3 LD's felt that they were asked to work too many hours a week. Two LD's mentioned that what was most troubling to them was their fellow employees. Two BD's were discontented with the management policy of their employer. Other responses included "no social opportunities" and "boring." No patterns or trends were evidenced across groups.

Adequacy of High School Preparation

A second important section of the questionnaire dealt with the adequacy of the participant's high school training for the world of work. When asked "which classes have been of greatest help after leaving high school," the most frequent response named courses related to vocational preparation (e.g., shop, childcare, home economics, etc.), across all three groups (10 of 21 controls, 4 of 12 LD's, 4 of 8 BD's). Six controls named courses related to college preparation. Two LD's named english and an additional two LD's named math. No additional groupings occurred. When the inverse of this question was asked, "in what areas did high school not adequately prepare you." three of 10 LD's identified mathematics. Two of 10 LD's and 2 of 20 controls identified the need for more vocational preparation. Twelve controls, 4 LD's, and 3 BD's felt satisfied with their high school preparation. It would therefore seem that preparation in mathematics was a concern of LD's both in this question and its inverse reported above.

Related to the above questions was the one concerned with the perceived need for additional training in reading, math, writing, and spelling. Fifteen of 20 controls, 9 of 12 LD's, and 9 of 9 BD's indicated the need existed! Of these 7, 6 and 3 respectively felt the need existed in more than one academic area. Mathematics was the single most frequently mentioned need area.

Directly related to the adequacy of high school preparation is the path taken during the participants post-secondary educational

experiences. Fifteen of 23 controls had taken college courses. Only one of 11 LD's and 5 of 9 BD's had registered for college preparation. Five of 23 controls, 7 of 11 LD's, 3 of 9 BD's had registered for specific technical training in post-secondary institutions (e.g., business, electronics, etc.). It would therefore appear that LD's, more so than the other two groups, do not find themselves in college.

Also related to the adequacy of high school preparation is the ability to be offered a job, or not, based upon requisite skills. When participants were asked if they were ever refused employment due to a lack of training or skill development only 3 of 22 controls responded in the affirmative whereas 6 of 11 LD's and 1 of 9 BD's did so. Would it be easier to get promoted with additional training? Ten of 22 controls, 8 of 12 LD's and 1 of 7 BD's said yes. This series of questions appear to be indicating that LD's would benefit from additional vocational training at the high school level.

Adjustment to the Adult World

Erik Erikson's well stated identity crisis points to the notion that the adolescent-young adult must explore and determine various roles for themselves (e.g., worker, husband/wife, father/mother, etc.), in their ascent to adulthood. This concept was embraced by educators in the early 70's when career education was officially recognized (as opposed to the job specific training afforded in the field of vocational education). The total adaptive adjustment of the special

needs learner in the adult world has now become of interest to the special educator. One critical component of total adjustment is the ability to make and keep friends. When asked "do you have friends," the results which appear in Table I were obtained.

Table I: Friendship Patterns

	Male Friends			Female Friends		
Group	None	Few	Many	None	Few	Many
Control N=23	0	7	16	6	17	23
LD N=12	1	3	8	6	6	12
BD N=9	0	1	8	1	8	9

It would appear, based on the results exhibited in Table I, that LD's have proportionately greater difficulty making and keeping friends than the remaining two groups. This is especially true regarding female friendships.

A second adult adjustment concern is related to the use of leisure time. Do you have a hobby? Sixteen of 23 controls, 9 of 12 LD's, and 8 of 9 BD's said yes. No discernable difference between groups is apparent. Do you read a newspaper? Seven of 23 controls, 6 of 12 LD's, and 2 of 9 BD's said no. It would appear that a proportionately greater number of LD's do not read newspapers. Concerning the reading of magazines, a similar finding resulted (response no- 2 of 21 controls, 3 of 12 LD's, 1 of 8 BD's). How many hours of TV

do you watch? Two of 21 controls, 5 of 11 LD's, and 3 of 9 BD's indicated more than three hours of viewing a day. Again, a proportionately greater number of the LD's appear to spend more time watching television, followed by the BD's.

Several questions related to economic activity were also enlightening. When participants were asked if they were able to save money it again appeared that proportionately fewer LD's were able to save (response no-2 of 22 controls, 4 of 12 LD's, 1 of 8 BD's). When asked "how do you pay your bills," the following result was obtained. Eighteen of 23 controls used checks, money orders, or a combination of both. However, only 4 of 12 LD's did. Six of 8 BD's used checks or money orders. A majority of LD's paid their bills using cash!

The results described above represent the "most interesting" highlights obtained by the pilot tryout of the questionnaire. Again the reader is cautioned that these results require further substantiation with much higher N's and better sampling. The authors are currently conducting such research.

Discussion

It would seem based on the results of this pilot study that of the three experimental groups (LD, BD, controls), the LD population has experienced the greatest adjustment difficulties in the adult world. LD's apparently settle for the jobs they secure rather than choose

work for personal interest. This finding appears evident in that what they enjoy most about work is "money," rather than the job itself. Additionally, it is the LD's that are refused work or promotion for lack of skill development, further evidence of settling. On the job, surprisingly enough, it is the LD's not the BD's that appear to experience greatest interpersonal conflict and require supervision. It is also the LD's that report fewer friendships out of work. It may be that LD's would profit from interpersonal skills development, an area heretofore reserved for the BD population. It is the BD's who report that such training, received as part of their special education curriculum, has helped them to make and keep friends.

The adjustment concerns of the LD's appear to have their roots in school. They report inadequate preparation in the basic academic subjects (especially mathematics) and, in addition, the need for more vocational education classes. It may be that the traditional expectations of educators regarding the adult roles of LD's, as reflected by curriculum objectives, are not accurate. The LD respondents in this pilot study did not go to college, but rather to trade school. Therefore curriculum which focuses exclusively on remedial academics, does not prepare the LD for what in fact will be his future; a future where after returning from a day of meaningless work, the television goes on and few papers or magazines are read.

What the findings seem to suggest is that the principles of career education would better serve the adjustment needs of adolescent LD's than would traditional curriculums exclusively focused on remedial academics. However, this finding must be considered tenuous until large N studies have replicated this result.

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RESEARCH RELATED TO VOCATIONAL TEACHER ATTITUDES TOWARD THE INTEGRATION OF HANDICAPPED STUDENTS

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Introduction

Several public laws critically bear on the issue of providing vocational education for handicapped students. The Education for All Handicapped Children Act of 1975 (P.L. 94-142) established the right of every handicapped student to a free, appropriate education. The term "special education" is defined in that act to include vocational education. Therefore, all handicapped students are entitled to specific vocational education programming. School districts are required to provide vocational training to handicapped students who need such services. The Vocational Education Act Amendments of 1976 (P.L. 94-482) strengthens the abilities of states to provide vocational education for handicapped youngsters. This law requires that 10% of federal vocational funds allocated to individual states must be spend on vocational programs and services for the handicapped.

These and other legislative mandates have similar provisions that call for equal opportunities for handicapped students to be educated and trained for the world of work. Furthermore, all special education services (including vocational education services) are to be provided in the least restrictive environment (LRE) that is appropriate for meeting the individual needs of handicapped youngsters. The implementation of this LRE doctrine has generally resulted in large numbers of handicapped students being placed into regular classroom settings. However, some concerns of vocational educators and special problems inherent in vocational education itself, have caused the implementation of the LRE concept in vocational education to be less than totally successful. Many school districts have found it difficult to develop efficient systems for providing integrated vocational education for the handicapped and numerous authors (D'Alonzo and Barrett, 1977; Lee, 1975) have suggested that more handicapped students should be provided vocational training in integrated or mainstreamed settings.

One dominant issue which appears to obstruct the realization of the goal of providing appropriate vocational education for handicapped youngsters is an attitudinal problem on the part of some regular vocational teachers. This difficulty has been specifically mentioned by Wargo (1978, p. 92) when he stated:

> A different attitudinal problem is faced in the reluctance of... vocational teachers to teach the handicapped. There are two discernable reasons for this reluctance. First, many teachers are insecure about working with handicapped children, because they never had any orientation or preparation for that... work. Second, teachers are not immune to the prevalent attitude that handicapped children are too debilitated to manipulate tools, materials, and processes.

The need for research in this area has also been discussed by D'Alonzo and Barret (1977, p. 47). They stated that:

> ...before successful integration of the handicapped into vocational programs can be implemented...the following areas must be investigated. Vocational teacher attitudes toward the handicapped and the willingness to accept them into their classes not only physically but psychologically.

The need for specific research in this area was also supported by a variety of professionals attending a conference on research needs related to career and vocational education for the handicapped (see Bureau of Education for the Handicapped Document OEC-0-74-7366). Conference participants specifically stated that research was needed assessing the relationship between the attitudes of school personnel and actual vocational preparation programs for the handicapped.

Though the need for research regarding vocational teacher attitudes has been well documented for some time, other authors (MacMillan, Jones, and Aloia, 1974) have called for more specificity regarding the precise nature of how negative attitudes may impact on the handicapped. The excellent review of attitudinal research by MacMillan et al. (1974) has caused many educators to question the rather widespread notion that negative teacher attitudes have a specific and detrimental effect upon handicapped students.

However, recent studies indicate that negative teacher attitudes may impact upon handicapped students in a way not discussed by earlier writers - namely, that initial negative attitudes may functionally bar students from placement in a regular (mainstreamed) class. Gilliam (1979), for example, found that regular class teachers played an important role in the determination of placement decisions for handicapped students when an integrated setting (regular class) was being considered. Minner (1980) found that regular class vocational teachers were very often consulted prior to any placement meeting where a handicapped student's educational future was discussed. Many special educators, counselors, etc. emphatically stated that they would not support placement in a regular class if the regular teacher of the class was not supportive of the placement. Thus, if regular class teachers hold initial negative attitudes toward a particular student or a particular kind of student (e.g. mentally retarded students), it is conceivable that the student may not be placed in that teacher's program.

The remainder of this paper will be devoted to an examination of vocational teacher attitudes toward handicapped youngsters and programs designed to alter those attitudes.

Vocational Teacher Attitudes

Moorman (1980) questioned 371 secondary level vocational teachers regarding their attitudes toward working with handicapped students. He found that most teachers had little confidence in their ability to effectively teach this population. Teachers cited the lack of training and their inexperience with the handicapped as reasons for their lack of confidence. Though not confident to actually teach handicapped youngsters, vocational teachers did not hold a generalized negative attitude toward the handicapped. The majority of vocational educators were willing to accept handicapped

students into their classes and felt that vocational education was important for them.

A study done by Minner (1980) supports Moorman's finding regarding the perceived inability of vocational teachers to work with handicapped youngsters. In this study, secondary level regular class vocational teachers rated their ability to work with Educable Mentally Retarded (EMR) and Learning Disabled (LD) students to be less than for nonhandicapped students described as possessing equivalent social and academic characteristics. Contrary to Moorman's findings, however, vocational teachers in this study generally regarded the handicapped in a negative manner. Vocational teachers consistently held more negative academic and social expectations for students labeled LD and EMR than for similarly described nonhandicapped youngsters. Learning disabled students in this study were perceived more negatively than were non-labeled students though students labeled EMR were viewed even more negatively than were their LD counterparts. The influence of the labels "LD" and "EMR" appeared to significantly influence the initial social and academic expectations of the teachers in this study.

Changing Attitudes

Though several authors have suggested that vocational teachers will develop more positive attitudes as they come into more direct contact with handicapped students (Hughes, 1978; McKinney, 1976), others have recommended that specific activities be implemented designed to hasten this process.

One program designed to alter attitudes has been developed by Weisgerber and Smith (1977). These individuals developed a comprehensive set of instructional materials involving seven training modules. One of the main thrusts of these modules is to inform vocational teachers about some prevalent

attitudes regarding the handicapped. It is hoped that teacher attitudes will change after completion of the program.

Another program designed to alter the negative attitudes of regular class vocational teachers was developed by staff members of Project EMPLOY (see Minner and Knutson, 1980). This approach utilized three distinct components - activities designed to inform vocational teachers about the characteristics and needs of the handicapped and legislation affecting the vocational education of handicapped students, activities designed to streamline and organize the actual process of mainstreaming handicapped students into vocational classes, and activities designed to increase the participation of vocational teachers in various mainstreaming activities (e.g. evaluations, participation at IEP and IEP revision meetings, etc.). This attitudinal change program developed from an extensive needs assessment completed in three school districts. Vocational teachers in the participating districts were found to hold a generalized negative attitude toward handicapped students due to their (1) lack of information regarding the handicapped and special education legislation (e.g. many teachers misinterpreted the LRE component of P.L. 94-142 to mean that all handicapped students had to be mainstreamed into regular classes), (2) lack of clarity regarding the process of mainstreaming actually used in their districts (e.g. some teachers felt that high school counselors developed the class schedule and the IEP for each handicapped student without parental, teacher, or student input) and (3) lack of participation in various mainstreaming activities.

Both of these programs have been implemented in a variety of settings though little actual data are available indicating the efficacy of either approach.

Conclusions and Recommendations

Attitudes are complex in terms of development and are equally difficult to change. The studies reviewed in this paper reveal that vocational teachers do not generally feel that they are capable of effectively teaching handicapped youngsters. Numerous educators have further suggested that some vocational teachers hold a generalized negative attitude toward the handicapped. Most importantly, initial negative attitudes may have a dramatic impact upon handicapped students. Regular class vocational teachers are often consulted prior to the placement of a handicapped student into their program and if they are not supportive of the placement, many educators seem to feel that the student should therefore not be placed into the program.

A variety of techniques have been developed that attempt to improve upon the attitudes of regular vocational teachers though there is virtually no empirical support that these activities are truly effective. It is interesting to note that so few programs utilize activities that directly and actively involve vocational teachers with handicapped students. Perhaps a program utilizing demonstration teaching of handicapped youngsters in vocational classes would do more to alter attitudes than any other approach. Many vocational teachers not only question their ability to teach the handicapped students but doubt that handicapped students possess the academic or social competencies to be successful in vocational classes. Attitudes may change quickly if teachers see that handicapped students can be successful.

There is little doubt that many more handicapped children could benefit from vocational education than are currently being served. Many more students could and should be served in regular vocational classes. Effective methods of improving vocational teacher attitudes must be developed so that

these students are educated in the least restrictive setting consistent with their needs and abilities.

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USING THE LIFE CENTERED CAREER EDUCATION COMPETENCIES FOR INSTITUTIONALIZED ADULT MENTALLY RETARDED PERSONS

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Career education as a programmatic and conceptual entity is but ten years old. Yet in that period of time career education has...

> ...made accomplishments such as legislation, funding, and a federal office of its own; a flurry of activity at the state and local levels, resulting in definitions, guides, policy statements, and curriculum modifications; endorsements from prestigious national leaders and organizations, including the U.S. Chamber of Commerce; the creation of career-oriented divisions in several professional organizations; feature issues in professional publications on career education; and national workshops and conferences on career education for (the) handicapped...(Brolin and Kokaska, 1979, pps. 87-88).

While there are many definitions of career education, certain basic themes are common among them. These definitions suggest that career education is a lifelong developmental process designed to provide individuals with the values, habits, skills, and attitudes to prepare for a successful and personally satisfying work life. Graduates of school programs emphasizing this concept are expected to possess: marketable job skills, positive work attitudes, career decision-making skills, basic academic skills, and the capability of responding to the rapidly-shifting demands of adult mainstream society (Mori, in press).

The relevance of career education for the handicapped has been amply stressed in the literature (Clark, 1980). Many special educators argue that career education is a total curricular vehicle that can provide handicapped students with the competencies to become better integrated in adult society. At present, abundant data suggest that 26 percent of handicapped persons are unemployed and on welfare and another 40 percent are underemployed and at the poverty level (Barone, 1973).

Clark (1980) highlighted the adult adjustment approach in establishing a rationale for career education for the handicapped. When this approach is used, adult adjustment criteria are translated into competencies adult handi-

capped persons need in their life career. Research concerning the adult adjustment of handicapped persons clearly establishes the critical importance of various personal-social and daily life skills (Kokaska, 1968; Cobb, 1972; Stuckless, 1978). In fact, as Clark (1980) and others have noted, it is the "life" skills and not job skills that frequently determine if a handicapped person will be successful in fulfilling roles in the home and the community.

Clark (1980) suggests that Brolin (1973) provided an adult adjustment approach in identifying major competencies for the mentally retarded. These competencies and the subcompetencies have been expanded in great detail by Brolin and Kokaska (1979). Brolin and Kokaska (1979) have proposed a curriculum model which demonstrates the interface among the competencies, the stages of career development, and school, family, and community experiences. The competencies and the curriculum proposed by Brolin and Kokaska (1979) are the basis for the project described in the remainder of this paper. This project involves staff training in a residential facility for the mentally retarded.

PROGRAM DEVELOPMENT

The Southern Nevada Mental Retardation Service's residential campus is an 80 bed facility on the "outskirts" of Las Vegas. The campus has six cottages, designed to appear like single-story townhouses. The architecture is typical of the southwestern U.S. and very little about the campus suggests it is home to 80 mentally retarded persons from six years to nearly sixty years of age and ranging from profound retardation to very mildly retarded. For the past nine months, the author has been providing on-site, inservice training to the "swing-shift" (2:30 p.m. to 11:00 p.m.) staff of the building

designated as transitional in nature. This building houses 14 young adult retarded persons, most of whom are mildly retarded. This group is seen as having the greatest potential for placement in community group homes or some other less restrictive living arrangements.

The Life Centered Career Education Competency Based Curriculum was selected as the basis for the training program. According to Brolin and Kokaska (1979, p. 110), the 22 competencies contained "...within the three curriculum areas have been identified in previous research...(and)...have been subjected to rigorous review throughout the country. Field test results reveal that they generally reflect the major outcomes that should be expected for students if they are to be successfully prepared for community living and working."

The three curriculum areas and the 22 competencies are shown in Table 1.

Table 1. Curriculum Areas and 22 Major Competencies (Brolin and Kokaska, 1979)

Daily Living Skills
1. Managing family finances
2. Selecting, managing and maintaining a home
3. Caring for personal needs
4. Raising children, family living
5. Buying and preparing food
6. Buying and caring for clothes
7. Engaging in civic activities
8. Utilizing recreation and leisure
9. Getting around the community (mobility)

Personal-Social Skills
10. Achieving self-awareness
11. Acquiring self-confidence
12. Achieving socially responsible behavior
13. Maintaining good interpersonal skills
14. Achieving independence
15. Achieving problem-solving skills
16. Communicating adequately with others

Occupational Guidance and Preparation
17. Knowing and exploring occupational possibilities
18. Selecting and planning occupational choices
19. Exhibiting appropriate work habits and behaviors
20. Exhibiting sufficient physical-manual skills
21. Obtaining a specific occupational skill
22. Seeking, securing, and maintaining employment

A preliminary, but informal, needs assessment was conducted with the five staff members participating in the project. It was determined that their knowledge level regarding aspects of mental retardation, teaching techniques, career education as it relates to adult adjustment, etc. was rather low. Based upon this information, specific training objectives were formulated for the trainees in the program.

The objectives were stated as terminal objectives, although in actuality, trainees began to work with selected clients after three, two hour training sessions. Client training is on-going as staff receive further skill training designed to improve their "teaching" skills, solve problems as they occur, and make decisions regarding client programs. The program objectives are as follows:

* Trainees will identify the learning characteristics of the mildly mentally retarded.
* Trainees will identify and demonstrate competency in selected skills of applied behavior management (i.e. targeting behaviors, recording baseline behaviors, etc.).
* Trainees will demonstrate competency in selected principles and methods of teaching the mildly mentally retarded (i.e. sequencing, moving from simple to complex-concrete to abstract, use of success-guaranteed learning early in instruction, strive for overlearning, use of real life situations to promote transfer of learning).
* Trainees will identify the rationale for career education as an adult adjustment approach and preparation for successful entry into the mainstream of society.

* Trainees will identify the major competencies of the Life Centered Career Education Competency Based Curriculum.
* Trainees will differentiate the most relevant competencies and subcompetencies in the curriculum and demonstrate the ability to determine the entering behavior of selected clients vis a vis the selected competencies.
* Trainees will demonstrate the ability to apply teaching methods and principles of behavior management to bring about the development of competence in the curriculum areas for the selected clients.
* Trainees will collect both formative and summative data regarding the effectiveness of the training with selected clients.

Initially the trainees were asked to select the three "highest functioning" clients in the building. This was done for several reasons, but mainly because the author felt that early success teaching clients would lead to stability and enthusiasm among the trainees. Many of the trainees as building-level staff lack formal education beyond high school, and frequently voice apprehension concerning their ability to "teach" clients. Since we were beginning with clients who had a greater probability for success, it enhanced the possibilities that the trainees interest in the program would remain high. Once the three clients were selected, the trainees administered a client competency attainment profile (CAP) to each client. The scoring for the various subcompetencies was placed on a zero to four scale. The client received a zero if the skill described was absent. A one was given if the skill could be done with physical assistance by the trainee, a two was given if a physical prompt was necessary to cause the behavior to occur, a three was given if a verbal cue was needed, and a four was given if the client was

able to perform the skill unassisted. In this fashion, both the trainees and the author were able to determine a more accurate (and thus more behaviorally precise) description of what the client was capable of doing.

Furthermore, many of subcompetencies had to be further analyzed into small behaviors. For example, subcompetency 11, "Exhibit proper grooming and hygiene" was further subdivided to include skills in:

* washing with soap and water
* shampooing hair
* cleaning and clipping finger and toe nails
* brushing teeth
* shaving (male and female)
* proper hygiene during menstruation
* use of deodorants and other hygiene aids
* combing/brushing hair
* hair cuts-selection of style, etc. (male and female)
* use of cosmetics
* use of kleenex

This breakdown was important for many of subcompetencies since the teaching of the various subcomponents would entail separate strategies.

Based on the results of the initial administration of the CAP, the trainees selected subcompetencies they felt were important to begin instruction. Priority was given to behaviors where the client received a zero or one and also those which the staff felt were critically important. For example, the trainees unanimously agreed that it was more important for our mostly "pedestrian" clients to know traffic rules and safety practices than to learn to drive a car, even if both subcompetencies were rated zero.

Table 2 shows the percentage of subcompetencies rated 0, 1, 2, 3, 4 for each client. This data is for the initial evaluation. For subcompetencies which were further subdivided, an "average" score is reflected by Table 2.

Table 2. Analysis of Subcompetencies as Rated by Trainees

Client	0	1	2	3	4 *
1	36.3	8.8	20.6	19.6	14.7
2	16.7	21.6	32.4	13.7	15.7
3	21.6	16.7	18.6	22.5	20.6

*Stated as percentages.

Once specific target behaviors were identified, the trainees began to work with clients to develop specific competencies. Many daily living skills were trained right in the living facility, which is equipped with a kitchen, laundry area, etc. Furthermore, trainees were instructed to conduct instruction in the activities as they normally occur during the day. For example, if cooking skills were being taught, they should be taught during the preparation of actual meals. Other skills must, by necessity, be taught in the community. Food purchasing skills were taught in grocery stores near the residential facility while other shopping skills were practiced in nearby shopping centers. Trainees were encouraged to make the community their classroom in order to create real life situations and promote the transfer of learning among clients.

The program was also extended directly to the clients' work area. All three clients are employed in a local sheltered workshop. Several of the trainees met with workshop staff and provided a brief overview of the program. Workshop staff provided input into the assessment of client skills in the occupational area, especially major competency 19 - Exhibiting Appropriate Work Habits and Behaviors, and 20 - Exhibiting Sufficient Physical-Manual Skills. The staff at the workshop are working cooperatively with the program trainees to promote the development of important skills in these areas.

PROGRAM EVALUATION

Program evaluation is being conducted both formally and informally. Formal evaluation includes the on-going collection of data relative to the acquisition of competencies by the clients. Data is generally collected on a daily and weekly basis regarding progress in achieving the established priorities. The CAP was also administered again six months after the program started. The results are shown in Table 3. In this table, only the goals evaluated initially as zero or one are shown. The table shows the actual number of subcompetencies rated originally as zero or one and the change as of the sixth month evaluation. As subcompetencies were selected, staff would begin instruction on several areas simultaneously. The data depicted shows changes in ratings collectively, that is the actual number of subcompetencies attempted and then the number in which progress was obtained. In this case progress is defined as moving from an initial rating of 0 to a 6-month rating of at least 2 or from an initial rating of 1 to at least a 6-month rating of three.

Table 3. Change in Subcompetency Performance After 6 Months

Client	Number of Subcompetencies Attempted	Number in Which "Progress" Was Noted	Percentage of Objectives in Which Progress Was Made
1	21	9	42.8
2	29	14	48.3
3	35	21	60.0

Since progress is actually partial accomplishment of the desired objectives, the 12 month evaluation will focus on the number of objectives fully accomplished as denoted by a score of 4. As can be seen from Table 3, all

clients made progress in the acquisition of the subcompetencies. A total of 21 objectives was attempted with client 1 and in 9 of those progress was made. Client 1 was initially the lowest functioning of the three clients selected. He made progress in 42.8 percent of the objectives selected for programming. The highest functioning client, number 3, made progress in 60 percent of the objectives attempted. This particular client is extremely close to being placed in the community. Only his difficulty in establishing appropriate heterosexual relationships and other miscellaneous sexual conduct problems are preventing him from strong consideration for group home placement at this time.

Additionally, there are several sources of informal evaluation being conducted. The author is observing each staff person working with clients and providing feedback regarding teaching skills, provision of reinforcement, etc. Furthermore, one trainee makes a presentation each week regarding a client in the program. The presentations involve a discussion of the subcompetency(s) being taught, methods of instruction, problems being encountered, and other pertinent information. The rest of the trainees and the author provide feedback to the presenter.

Another source of evaluative data is the consumer satisfaction information being collected. Staff members were asked to complete the form shown in Figure 1 after three and six months in the training program.

Figure 1. Staff Satisfaction Regarding Training

1. Do you think the staff development opportunities are meeting your needs to function competently in your position?

   ___Yes (Go to item 3) ___No (Go to item 2) ___Don't Know (Go to item 3)

2. What additional opportunities do you think there should be?

3. Do you feel you have gained anything from your parti-

cipation in the training program?

___Yes (Go to item 4) ___No (Go to item 5) ___Don't Know (Go to item 5)

4. What have you gained in:

   a. knowledge (list areas or topics of knowledge)

   b. documenting client skill level (list type of skills)

   c. planning skills (list type of skills)

   d. implementation skills (list type of skills)

   e. changed attitudes (list kinds of attitudes developed)

5. Overall, are you satisfied with the training that has been provided to meet your staff development needs?

   ___Yes ___No ___Don't Know

6. Can you think of any ways the staff development program might be changed to serve you better?

   ___Yes (Go to item 7) ___No ___Don't Know

7. In what ways could the staff development program be changed?

Generally satisfaction with the program is running very high. For example, at three and six months all five trainees responded yes to the questions asking if the training was meeting their needs and if they felt they were gaining something from the program. For the question meaning overall satisfaction, all six responded yes at three months and five out of six responded yes at six months. The trainee who answered no to this question indicated a need for more direct instruction in how to actually teach new subcompetency skills. In response to question six regarding training program changes, three out of five responded yes at both three and six months and suggested a need for more time to be in the community with the clients to actually do instruction there--unfortunately staff shortages prevent this change from being implemented.

The present plan regarding the training is to continue to program and eventually expand it to include more clients. Furthermore, the building has been renovated and staff have received permission to allow clients to assume greater responsibility for the management of their home. Included among new client responsibilities will be menu planning, shopping for certain items (much of the food is still purchased "bulk" due to cost factors), preparing meals, cleaning, and so on. It is anticipated that the favorable evaluative data will allow the program to continue.

SUMMARY

Adult adjustment skills for the handicapped have long been recognized as crucial to success in independent living in the community. This program described an attempt to use the expanded materials developed by Brolin and Kokaska (1979) and apply a competency based curriculum to institutionalized adult retarded persons. Preliminary results would indicate the clients are making reasonable progress in accomplishing the skills and that staff persons are satisfied with the training.

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FIVE HYPOTHESES ABOUT CAREER DEVELOPMENT INITIATIVES AND THE PHYSICALLY DISABLED

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FIVE HYPOTHESES ABOUT CAREER DEVELOPMENT INITIATIVES AND THE PHYSICALLY DISABLED

It is a pleasure to be able to make a few comments regarding Career Development Initiatives and the Physically Disabled. These comments are based on five years of experience in working in the fields of career education and special education. They reflect my perceptions as an educational psychologist whose background had been non-special education, non-rehabilitation, and perish the thought, non-career education. In a sense I have been a participatory observer on the career development/special education scene. I have framed these general comments in the form of hypotheses and offer them as food for thought for anyone daring enough to be dabbling in the fields of career education and special education. As these comments unfold I will use the Career Education program developed at Human Resources Center as an example of how these hypotheses operate when developing a career development program.

HYPOTHESIS ONE

The career development process is not substantially different for a person who is disabled when compared to a person who is not disabled. What is different for a person who is physically disabled is his/her experiential base. By that I mean that the experiential base of a person whi is physically disabled is heavily medically oriented. Concerns related to medication, medical crises and even life threatening experiences have served to limit the experiential stimulation base of the developing person. It is possible that the developing child has been raised in a protective bubble by parents who are frightened and/or confused by the disabling condition. This overprotection certainly limits the opportunity for growth experiences.

This limited experiential base has ramifications for social growth which is typically learned through the every day give and take of play experiences. The physically disabled child is inhibited by the nature of the disabling condition or by parental expectations from participating in typical social interactions and, therefore, is limited in his/her opportunity to develop an adequate array of social experiences.

Regardless of this experiential deficit, the career development process that is operational for everyone is still taking place. If a physically disabled young adult is to participate effectively in the career marketplace, then the school career education programs must provide some form of a social "compensatory" program to provide the opportunity for experiences similar to those of non-disabled students. These socializing experiences are common in career education programs. For a developing person who is disabled, these socializing experiences are a must.

HYPOTHESIS TWO

There are differing levels of receptivity by faculty members to career education materials and career eeducation initiatives. Therefore, different approaches to developing programs are necessary for the career educator. The approach to be used varies according to whether the program to be developed is for elementary school students or secondary school students.

There is more receptivity on the part of elementary faculty members to utilizing and/or developing career education curriculum materials than there is on the part of secondary school faculty members who are "content" oriented. The irony of the situation is that the secondary faculty members should be more career oriented than elementary faculty members because their students are so close to making the transition from school to work.

Therefore, it is possible to build curriculum activities with the full cooperation of elementary school teachers. They are most receptive to new ideas and approaches. At Human Resources School the role of the career education specialist was that of getting out of the way of creative faculty who developed curriculum materials, centering on the themes of self concept, decision-making and career awareness, which were integrated into the language arts, social studies, mathematics, and science curriculum of the school. It is our contention that these materials were so well received and utilized because the elementary faculty participated fully in their development and had a sense of ownership in these materials. From our vantage point this is the ideal situation and it works.

Once in the land of Junior High and Senior High school, however, it is almost impossible to break into the everyday activities of the school curriculum. Therefore, the career educator must be content with developing a program which operates on the periphery of the school program. These peripheral activities can be designed, however, to create a career focus for the school. At Human Resources School these activities were framed into a typical manpower development model beginning with a pre-vocational evaluation, progressing through shadowing and paid work experiences while being supported by Career Guidance mini-courses. As an extra added set of attractions, activities such as Speakers' Bureau, Business Ventures and Career Focused Field Trips added to the career tone of the school. While, ideally it would be helpful to break into the every day curriculum of the school, realistically, the approach at Human Resources Secondary School reflects the need to adapt to the intransigence of secondary school teachers refusal to tamper with "their curriculum".

HYPOTHESIS THREE

Career Education, Vocational Education and Vocational Rehabilitation programs which have been designed to intervene in the career development process of myriad minority groups essentially follow the same service delivery model. Only the discipline which delivers the model has been changed to protect the jobs of the developers.

It takes no great effort to uncover the same paradigm in Career Education, Vocational Education and Vocational Rehabilitation programs designed to effect change in the placement of special populations in competitive employment.

The usual paradigm that is operational includes: Intake, Pre-Vocational Evaluation, Individualized Written Plan, Individual and Group Counseling, Shadowing and Work Experience or OJT experiences. The following materials describe these components

and relate examples of how these are part of the Career Education program at Human Resources School.

INTAKE

This is characterized by some sort of screening of applicants for programs to determine their interest and/or capability to successfully participate in the services to be delivered. In the program developed at Human Resources School a Student Occupational Review Team was established to review the potential participants in the secondary career education program. While it was the opinion of the developer of the program that the secondary school activities be available to all students, the school administrator did not have a similar view. This necessitated a development of a screening team. This review team consisted of the school administrator, the school counselor, a vocational rehabilitation counselor (paid for by federal funds), selected teachers from the school staff and the research team. Any and all data available about the student's capabilities and interest were used to determine the types of activities which may be appropriate for the student's vocational development over their four year high school program.

While a SORT team may not be operational in your program, I am sure there is some form of a screening committee which evaluates students and dictates courses of action which will be taken over the course of his/her high school career to improve their future employability. I do not wish by my comments to demean such screening committees. They serve many useful purposes. Least of which is that of keeping the career focus of the students at the forefront of the planning mode of school staff. My only purpose in elaborating on the screening committee is to give an example of how this fits into the typical career development paradigm that is operational in so many school and other support services for persons with disabilities.

PRE VOCATIONAL EVALUATION

When I became active in the fields of special education, career education and vocational rehabilitation, I assumed that there was a large system of evaluative knowledge which applied to the field of the disabled. Rehabilitation facilities have extensive pre-vocational evaluative materials which are used to evaluate, select and direct adults for training and placement in entry level jobs. Basically, however, the evaluative materials are the same as those used in the school systems by counselors and psychologists. There are the same aptitude, ability, personality and interest scales that are in common used in the regular school programs. However, what is different is that the testing is concentrated into a brief span of time and the individual is given an array of tests in eight full days of testing. The battery of tests is not unlike the battery one takes at the beginning of a military career. At the completion of this testing, a written evaluation of the individual's strengths and weaknessess is developed with recommendations for the types of jobs or the career area which is best suited to the individual's abilities.

At Human Resources School such a battery of tests is part of the Career Education model which is in place. However, I have reservations about the intensity of the testing program in that it places extreme pressure on the student to excel. I have reservations about the permanent effect such extensive test reports have on the future career aspirations of persons with disabilities. Emerging adults can have their whole future dictated to them on the basis of two weeks of testing. I have reservations about the reliability and validity of these data because in many cases the tests have been adapted to adjust to the physical limitations of the disabled person. Such adjustments, unless properly validated, affect the reliability and the validity of most scales. Many of which were not developed for use with a special population.

INDIVIDUALIZED WRITTEN PLAN

Public Law 94-142 requires that an individualized written plan be developed for each special student. A written individualized plan is nothing new to laborers in the field of rehabilitation. The IWRP (Individualized Written Rehabilitation Plan) which is required in all rehabilitation facilities contains the same requirements of short term and long term objectives for each individual as does the Individualized Education Plan. At Human Resources School there was even talk of developing an Individualized Career Education Plan (ICEP). These plans never materialized. In effect, what happened was that the SORT review team made vocational and career recommendations for each student which in turn became part of the student's Individualized Education Plan.

I am an advocate of such individualized written plans. They foster accountability and the way the laws which govern their creation are written, they also require the involvement of the disabled person in approving the prescribed program of activities. This element of personal control by the disabled person of services to be delivered is healthy and fosters a sense of responsibility which is needed to succeed in the world of work and in life.

INDIVIDUAL AND GROUP COUNSELING

Individual and group counseling are the bread and butter of any Career Development Initiative Program. Group Counseling programs usually cover general work readiness skills, personal development skills and career awareness/job hunt skills. Since the competencies related to these skills are universal both school and special support service delivery agencies have mounted similar programs to develop these skills. Many of the work readiness and personal development skill materials are adapted from Guidance Associates initiatives or the extensive number of values clarification materials which were developed in the sixties and seventies for school programs. The Career Awareness and Job Hunt Skills materials have been the mainstay of Vocational Rehabilitation, Career Education, and Vocational Counseling school programs.

At Human Resources School a number of these materials have been packaged into eight session mini-courses dealing with

communication skills, problem solving skills and job hunt skills. Many activities are quite usable with a physically disabled population with little or no modification. The activities of the group guidance sessions are not as important as is convincing the administration and staff of the school of the fact that a number of their students are employable. Once that breakthrough is made then the time allocation for group guidance mini-courses is no longer a daily or weekly battle.

I have not described these materials extensively because the space allocation for this paper does not permit extensive explication. Suffice it to say that such materials are available from the publications of the Career Education Program of Human Resources School. The content of these materials reflect efforts to introduce some of the vocational rehabilitation materials into the high school group guidance sessions. These materials are well developed and easily adapted to any school population.

SHADOWING

Shadowing is an activity not unlike student teacher observation. In typical career education programs, time is set aside for students to observe workers at a variety of work sites. It is a career exploration activity. Before participating in a shadowing experience, participants are trained in what to observe and how to report out and, more importantly, synthesize their observations into something meaningful for themselves. Vocational rehabilitation and school programs have made limited use of theis experience mainly because of the need to get commitments from employers and/or employees to allow observations to take place. Shadowing requires time and planning but it does pay dividends.

At Human Resources Center we are fortunate to have a factory as part of the setting. The facility is not the typical school setting. There are numerous types of positions which can be observed. The politics and the effort needed to coordinate shadowing experiences has paid off in having some students get a more realistic picture of their potential employability. In many respects, shadowing offers more promise as a career exploration activity then reading the Occupational Outlook Handbook. Students not only become directly involved with workers but they also must encounter and overcome a variety of environmental and mobility barriers to get to their observation sites.

WORK EXPERIENCE PROGRAMS/OJT

Work experience programs are as far as school programs are willing to go in trying to relate the world of work to school. In some school programs work experiences follows the form of a school service program and the reward for the student's work is a school letter or pin. While this may be worthwhile, it is our experience at Human Resources School that unless there is money at the end of the student's efforts, any resemblance to the work experience program and the world of work ceases to exist. That paycheck is the key which unlocks the student motivation. Students, who in the past were "reluctant workers" become quite diligent in their efforts and look forward to paydays.

On the job training programs are similar to work experience programs. The difference is that at the end of the training program the participant is guaranteed a full time job by the employer. This commitment prior to placement is the hardest part fo the placements. While work experience programs commonly operate during the summer, OJT experiences take place any time during the year.

In both types of employment experiences, the federal government has stimulated the interest of employers by providing financial support for the employee who performs work at no cost to the employer. CETA programs historically pursue this approach. Unfortunately, CETA initiatives have been substantially curtailed. Without such external stimulation from federal or state agencies, support for work experience or OJT programs will be more difficult to find. School and rehabilitation counselors are hard pressed right now to find full time employment for persons with disabilities let along find part time or summer time employment for these students. Without federal or state support for work experiences or OJT experiences these useful career development initiatives will not be viable.

In all of these activities the materials and concepts used as part of this manpower development paradigm are similar is not the same. Both educators and rehabilatators obtained their training from similar schools of thought, viz., psychology and sociology. Essentially both sets of practitioners have come up with the same answers to the same employability concerns because their knowledge base is essentially the same.

HYPOTHESIS FOUR

Career Education/Career Development materials to be used with the physically disabled are essentially the same as the materials used with any other population. However, the following considerations must be kept in mind when these materials are utilized:

a. The Career Development Specialist must be sensitive to the personal, environmental and work site accommodations which must be made to use these materials and/or to facilitate the employability of the individual.

b. An age related developmental stage approach cannot be applied to a physically disabled population. The use of such age related categorizations automatically place a physically disabled person at a disadvantage because differences in motor development aspects of individual growth and development may interfere with the cognitive, social and emotional growth of the individual. It is possible that the developmental stages delineated by a number of theorists may be cyclically repeated throughout the life span. A person may be recycled through various stages when medical crises erupt during the individual's life.

c. A competency based approach to the developmental tasks delineated by career development theorists is reasonable as long as the age frames for these developmental tasks are removed and the conditions under which these competencies are to be achieved delineate the personal, environmental and work site modifications which, is used, allow a person with a physical disability an equal opportunity to succeed. Such a competency based approach is in place at Human Resources School.

HYPOTHESIS FIVE

<u>There is a significant need to convince significant others in the life space of the disabled person that this person is indeed capable of being a productive worker</u>.

Many educators do not believe that the physically disabled students in their charge are capable of employment and espouse "education for the sake of education" platitudes. In effect, they pass their negative vibrations to their students and help support low career expectations for the disabled.

Employers do not want to employ disabled workers. A few make some effort but the majority simply wish the physically disabled worker would return to their homes and rid themselves of the delusion that they can be productive workers. Employers will not seriously seek out disabled workers unless it is in their self interest to do so. As of now there is no self interest motivation in existance for employers. There is no payoff for the employer to hire the disabled worker and until the employer is convinced it is good business to employee disabled workers little progress will be made in this area. Rehabilitation workers stress entry level placements for all disabled workers as a reflection of their lack of conviction of the employability.

Career laddering for physically disabled employees is virtually non-existant. Tokenism does prevail but for the most part employment of the disabled is only at entry level positions.

Parents and family members have to be convinced that the disabled member of their family is truly employable. Studies have indicated that parents more so than any other professional, are the most significant factor in shaping the career aspirations of their children. Parent education in relation to career development is a vast wastel and because parents and families are doing their best to survive through a difficult situation in which all elements of the family system are under stress. There is little time for being concerned about the future "career" of the developing child when families are more concerned with surviving in the here and now. For many parents and families the future will have to take care of itself even though their most frequent expressed concern is, "what will happen to him/her after I'm gone?"

SUMMARY AND CONCLUSION

The materials I have just discussed have accomplished the two objectives of this paper. They summarize observations I have made through my work in Career Education and Special Education over the past five years. Parenthetically these comments also describe the elements of the Career Education program which is in effect at Human Resources School. There was neither time or space of delineate this program more fully. For detailed descriptions of the rationale, the components and the curriculum of the Career Education Program, I refer the reader to the monograph series just published at Human Resources Center.

There is a tremendous hue and cry for integration of education and rehabilitation services as they relate to the needs of the severely disabled population in our country. However, there seems to be litte evidence of an integrated approach to the delivery of such services. As a result there is much duplication of effort as both education and rehabilitation counselors use the same materials in serving these emerging adults. Hopefully, this situation will be remedied in the future.

While cultural assimilation has been taking place in our society for physically disabled adults, as witness the curb cuts, designated parking spaces and accessible facilities, structural assimilation is as non existant for this minority group as it is for other minority groups. The key structures of society, is employment. The career development initiatives described in this paper are merely the tip of the iceberg of what remains to be done. As educators, rehabilitation professionals, employers, we must all work together to prepare disabled young adults in such a manner as to enable them to be able to take advantage of the equal opportunity legislation which has made 1981 the International Year of Disabled Persons. Let's make the eighties a period of time in which the disabled take their rightful place in society with dignity and pride in their accomplishments.